

**ABSTRACT OF THE DISCLOSURE**

A semiconductor assembly having a submount with a plurality of conductive traces. A semiconductor array, such as a VCSEL array or a detector array, is attached to the submount. A plurality of conductive vias pass through the submount's body, or a conductive trace is disposed between a lower portion and an upper portion of the submount. Bonding wires electrically connect the individual semiconductor elements to conductive traces, while the conductive vias (or the conductive trace between the lower and upper portions) can provide additional electrical connections. The submount is beneficially of a ceramic material, and the conductive traces can include conductive pads for connecting to a printed circuit board or to a flex board. Locating features can extend from the submount, and an optical element can mount to the locating features. Alternatively, the locating features can be used to arrange the semiconductor assembly relative to an external structure.